

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Medtronic Med Rel Inc.

#### Puerto Rico Manufacturing Extension Inc

#### Eliminating Excess Inventory at Med

##### Client Profile:

Medtronic Med Rel, located in Juncos, Puerto Rico, is a subsidiary of Medtronic, Inc., of Minnesota. The company manufactures pacemakers and is in the process of expanding their manufacturing capabilities to bring new products to its plant. The company currently employs 400 people.

##### Situation:

Medtronic was experiencing excess inventory in the Final Pack and Clean Room areas. This high inventory contributed to operational inefficiencies that were negatively impacting the planning and scheduling of job orders in both areas. The company contacted the Puerto Rico Manufacturing Extension Inc (PRiMEX), a NIST MEP network affiliate, for assistance.

##### Solution:

PRiMEX conducted public Lean workshops, after which Medtronic's management agreed to continue with additional trainings in Lean tools, such as Pull Kanban and Quick Change Over, in order to set up a new process flow, inventory levels and job order. A three day Kaizen event was coordinated in the Final Pack area. Through theory and hands-on exercises, selected employees were trained in lean concepts. Using brainstorming, walk-through process, value mapping and inventory analysis, required changes were put into effect. With some support from PRiMEX, employees were able to apply the same methodology in the Clean Room area. In both instances, significant improvements were achieved.

##### Results:

###### Final Pack Area:

- \* Increased daily output by 26 percent - from 1100 to 1500 units.
- \* Reduced set-up time by 77 percent - from 26 seconds to 6.24 seconds.
- \* Reduced lead time by 50 percent - from 2 days to less than 1 day.
- \* Reduced travel time by 66 percent - from 363 feet to 120 feet.
- \* Increased units by 34 percent - from 29 units to 44 units.

###### Clean Room Area:

- \* Increased daily output by 33 percent - 900 to 1200 units.
- \* Reduced inventory by \$840K - from 4,000 to 2,300 units.
- \* Increased units per employee by 42 percent - from 3.5 to 5.2 units.
- \* Increased people utilization (moved) - from 257 to 220.

##### Testimonial:

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